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EXAMINER

BASHAW, HEIDI M

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3732

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,145	Applicant(s) KRUMSIEK ET AL.	
	Examiner HEIDI M. BASHAW	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/5/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 6 recites the limitations "the coronal threaded section" and "the apical threaded section" in lines 2 and 3 of the claim respectively. There is insufficient antecedent basis for these limitations in the claim.
4. Claim 27 recites the limitation "the ceramic abutment" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 10, 18, 24 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Vrespa 5,259,398.
3. Re claim 1, Vrespa teaches a tooth implant including a threaded enossal region 24/22/23, a middle region 22 and a coronal region 23 wherein the enossal region includes different threaded sections as illustrated in fig. 8.

4. Re claim 2, Vrespa teaches the tooth implant wherein the threaded enossal region comprises three different threaded sections as illustrated in fig. 8.
5. Re claim 3, Vrespa teaches the tooth implant wherein the three threaded section each extend substantially over a third of the length of the enossal region as illustrated in fig. 8.
6. Re claim 10, Vrespa teaches the tooth implant wherein the middle region of the implant includes a neck region conically increasing in the course form apical to coronal as illustrated in fig. 8.
7. Re claim 18, Vrespa teaches the tooth implant wherein the coronal region includes a conical retention plug 72 as illustrated in fig. 3.
8. Re claim 24, Vrespa teaches the tooth implant wherein at least one of the threaded sections of the enossal region is provided with at least one groove 30 extending at least over a partial region of the axial length and forming a throat as illustrated in fig. 1.
9. Re claim 26, Vrespa teaches the tooth implant wherein the depth of the groove is greater than the respective height of depth of thread as illustrated in fig. 1.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 as applied to claims 1-2 above, and further in view of Huebner 6,030,162.

12. Re claim 4, Vrespa teaches the tooth implant wherein the threaded enossal region includes an apical threaded section 24, a middle threaded section 22 with a conical core and a cylindrical outer diameter envelope and a coronal threaded section 23 having a low depth thread wherein at least the coronal threaded section comprises a trapezoidal thread as illustrated in fig. 8.

13. Vrespa does not specifically teach the apical threaded section having a high depth of thread with steep flanks, however does teach the middle section having high depth thread with steep flanks.

14. Huebner teaches a tooth implant wherein the apical threaded section having a high depth of thread with steep flanks as illustrated in figs. 1 and 3.

15. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Huebner since it has been held that rearranging parts of an invention involves only routine skill in the art (*In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) MPEP 2144.04 VI C).

16. Re claim 5, Vrespa in view of Huebner does not specifically teach the tooth implant wherein the middle threaded section has a depth of thread of 60 to 80 % of the depth of thread of the apical threaded section, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Huebner since it has held "[W]here the general conditions of a claim are disclosed in

the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” (*In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) MPEP 2144.05 II A).

17. Re claim 6, Vrespa does not teach the tooth implant wherein the coronal threaded section has a depth of thread of 30 to 50% of the depth of thread of the apical threaded section, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa since it has held “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” (*In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) MPEP 2144.05 II A).

18. Re claim 9, Vrespa teaches the tooth implant wherein the outer diameter of the apical threaded section is smaller than the outer diameter of the middle and the coronal threaded section as illustrated in fig. 8.

19. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 in view of Huebner 6,030,162 as applied to claims 1-2 and 4 above, and further in view of Grafelmann 4,863,383.

20. Re claim 7, Vrespa in view of Huebner does not teach the tooth implant wherein the middle threaded section has thread bridges becoming wider and flutes becoming more narrow at substantially the same pitch from the apical end threaded section to the coronal threaded section, however, does teach the thread bridges becoming wider from the apical end to the coronal threaded section.

21. Grafelmann teaches the tooth implant wherein the thread bridges become wider and flutes become narrow at substantially the same pitch as illustrated in figs. 3-4.

22. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Huebner further in view of Grafelmann in order to maintain a substantially constant outer diameter.

23. Re claim 8, Vrespa teaches the tooth implant wherein the middle threaded section includes a conical base body 34 defined by the fluted as illustrated in fig. 8.

24. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 as applied to claims 1 and 10 above, and further in view of Sapkos 5,816,809.

25. Re claim 11, Vrespa does not specifically teach the tooth implant wherein the neck region is elliptical in cross section.

26. Sapkos teaches the tooth implant wherein the neck region is elliptical in cross section (col. 3, ll. 58-61).

27. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Sapkos as a matter of obvious design choice since it has been held that changes in shape involve only routine skill in the art (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) MPEP 2144.04 IV B).

28. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 as applied to claims 1 and 10 above, and further in view of Holmen et al. 2004/0006346 (Holmen).

29. Re claim 12, Vrespa does not teach the tooth implant wherein the neck region is provided with a multiple thread.

30. Holmen teaches the neck region is provided with a multiple thread 11 as illustrated in fig. 2 (par. 82).

31. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Holmen in order to inhibit marginal bone resorption as taught by Holmen (par. 82).

32. Re claim 13, Vrespa does not teach the tooth implant wherein the thread is respectively formed laterally at the neck region and extends in the inserted implant in the approximal region to the adjacent teeth as illustrated in figs. 2 and 10.

33. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Holmen in order to inhibit marginal bone resorption as taught by Holmen (par. 82).

34. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 as applied to claims 1 and 10 above, and further in view of Abels 6,220,857

35. Re claim 14, Vrespa does not teach the tooth implant wherein the neck region is provided with an anti-adhesive coating.

36. Abels teaches the use of an anti-adhesive coating (col. 3, ll. 30-34).

37. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Abels in order to prevent unwanted material from sticking.

38. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 as applied to claims 1 and 10 above, and further in view of Giglio 5,417,568.

39. Re claim 15, Vrespa does not teach the tooth implant wherein a transition from the neck region to the implant shoulder is formed garland shaped.

40. Giglio teaches the tooth implant wherein a transition from the neck region to the implant shoulder is formed garland shaped 18 as illustrated in fig. 2.

41. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Giglio in order to follow the gingival margin and produce an esthetically attractive gum line as taught by Giglio (col. 1, ll. 40-55).

42. Re claim 16, Vrespa does not teach the tooth implant wherein a bevel is provided at the transition from the neck region to the implant shoulder.

43. Giglio teaches the tooth implant wherein a bevel is provided at the transition from the neck region to the implant shoulder as illustrated in figs. 5A-5B.

44. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Giglio in order to follow the gingival margin and produce an esthetically attractive gum line as taught by Giglio (col. 1, ll. 40-55).

45. Re claim 17, Vrespa teaches the tooth implant wherein the implant shoulder has a flat coating surface perpendicular to the longitudinal axis of the implant as illustrated in fig. 3.

46. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 as applied to claim 1 above, and further in view of Yeung 2001/0055743.

47. Re claim 19, Vrespa does not teach the tooth implant wherein a detachable gingival sleeve is arranged at the middle region.

48. Yeung teaches the tooth implant wherein a detachable gingival sleeve 110 is arranged at the middle region as illustrated in fig. 13.

49. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Yeung in order to be able to receive a crown or bridge as taught by Yeung (par. 20).

50. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 as applied to claims 1 and 18 above, and further in view of Bauer 5,074,790.

51. Re claim 20, Vrespa does not teach the tooth implant wherein the retention plug is formed conically and has a lower conicity in its base region and a greater conicity in its head region.

52. Bauer teaches the tooth implant wherein the retention plug is formed conically and has a lower conicity in its base region and a greater conicity in its head region as illustrated in fig. 1.

53. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Bauer since it has been held that changes in shape involve only routine skill in the art (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) MPEP 2144.04 IV B).

54. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 as applied to claims 1 and 18 above, and further in view of Rogers et al. 5,989,026 (Rogers).

55. Re claim 21, Vrespa does not teach the tooth implant wherein a ceramic abutment is applied to the retention plug.

56. Rogers teaches the tooth implant wherein a ceramic abutment is applied to the retention plug (col. 8, ll. 14-17).

57. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Rogers since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (*In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) 2144.07).

58. Re claim 22, Vrespa does not teach the tooth implant wherein the abutment has a core made of densely sintered ceramics and an outer body made of porously sintered ceramics.

59. Rogers teaches the tooth implant wherein the abutment has a core (col. 8, ll. 14-17). Rogers does not teach the core made of densely sintered ceramics and the outer body made of porously sintered ceramics, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

60. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Rogers since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (*In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) 2144.07).

61. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 further in view of Rogers et al. 5,989,026 (Rogers) as applied to claims 1, 18 and 21 above, and further in view of Filhol 5,263,996.

62. Re claim 23, Vrespa in view of Rogers does not teach the tooth implant wherein a removable handling projection is attached to the retention plug.

63. Filhol teaches the tooth implant wherein a removable handling projection 5 is attached to the retention plug 4 as illustrated in fig. 1.

64. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Rogers further in view of Filhol in order to aid in the insertion of the tooth implant.

65. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398 as applied to claims 1 and 24 above, and further in view of Kownacki et al 5,816,812 (Kownacki).

66. Re claim 25, Vrespa does not teach the tooth implant wherein multiple grooves are provided in the enossal region and are disposed offset to each other about the circumference of the implant.

67. Kownacki teaches the tooth implant wherein multiple grooves are provided in the enossal region and are disposed offset to each as illustrated in fig. 7A.

68. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vrespa in view of Kownacki since it has been held to mere duplication of the essential working parts of a device involves only routine skill in the art (*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) MPEP 2144.04 VI B).

69. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vrespa 5,259,398.

70. Re claim 27, Vrespa teaches a dental drill for use with the tooth implant comprising a shaft 102 and an operational region 106, the shape of which is adapted at least to the enossal region of the tooth implant wherein an application aid 140 in the form of an abutment is disposed on the shaft adjacent to the operational region as illustrated in fig. 9 (col. 14, ll.9-21). Vrespa does not specifically teach the abutment is ceramic, however, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (*In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) 2144.07).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEIDI M. BASHAW whose telephone number is (571)270-3081. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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